

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



1.9
R6
Ja
1928

LIBRARY
RECEIVED
PROGRESS OF THE BARBERRY ERADICATION CAMPAIGN IN IOWA, 1928

By P. W. Rohrbaugh, Agent^{1/}, Office of Cereal Crops and Diseases

Bureau of Plant Industry, U. S. Department of Agriculture

★ MAY 20 1928 ★

U. S. Department of Agriculture

Introduction

The United States Department of Agriculture, in cooperation with the State Agricultural Colleges, State Departments of Agriculture, and other agencies in 13 of the upper Mississippi Valley States, is conducting a campaign to destroy the common barberry. The barberry has been condemned because it is the principal source of the black stem rust of wheat, oats, rye, and barley in these States. The following States make up the barberry-eradication area: Colorado, Wyoming, Montana, Nebraska, South Dakota, North Dakota, Iowa, Minnesota, Illinois, Wisconsin, Indiana, Ohio, and Michigan. The campaign was started in 1918.

History of Common Barberry in Iowa

Common barberry bushes were brought to Iowa by the early settlers. The barberry was used as an ornamental, for hedges, and for a fruit bush. Jellies and jams were made from the berries.

Many plantings were made between 1870 and 1880; for example, one nurseryman in Iowa reports that he grew and sold about 20,000 barberry bushes during the year 1880. This seems to be about the end of the popularity of the barberry as shortly after this date reports indicate that nurserymen stopped growing barberries because the farmers who had bought them complained of their spreading rust to grains. At the time the campaign to destroy these bushes was started, comparatively few bushes were being sold by the nurseries and many bushes undoubtedly had been destroyed voluntarily by nurserymen and farmers.

Reason for Removing Common Barberry Bushes from Iowa

It is not a new thing to blame barberry for spreading black stem rust. The farmers of Europe for over 200 years have known that common barberry bushes spread rust. Nearly all of the countries of Europe have laws against the common barberry. However, there was no clear scientific proof that the rust of the barberry bushes was the same as that on the grains until DeBary, a German scientist, in 1865, proved that they were only different stages of the same fungous disease.

Black stem rust causes an average annual loss of about 3,500,000 bushels of grain in Iowa. This means a financial loss of approximately \$2,500,000 a year. Sometimes the wheat crop, which formerly was much larger in Iowa than now, is almost a total loss because of rust damage. The important oats crop frequently suffers material damage from this disease. The common barberry is largely responsible for this rust and must be destroyed.

Methods of Finding Bushes

Two methods of finding bushes have been used. These are by the actual surveys of properties and by educational means. The first survey of properties was completed in 1924. This survey was made very rapidly in order that the largest number of bushes might be destroyed in the shortest possible time. By this means the larger sources of rust inoculum were destroyed and the spread of barberry by seeds which the birds eat and scatter was reduced. No attempt was made at that time to go through all of the groves and the timber along streams. It has been found since that in many places along streams great numbers of barberries are growing wild. A second survey now is being made. In this second survey every grove, native timber, fence row, and stream bank are searched. It is a long, slow process to go through all of the native timber, through all of the groves, and along all of the streams in a State as large as Iowa, but it must be done if all common barberry bushes are to be found and killed.

An educational campaign has been carried on from the beginning of the campaign. Large quantities of literature have been sent to schools for use in the classrooms. Bulletins have been distributed to farmers and city property owners. Thousands of articles have been published in newspapers of the State. Exhibits have been put up at county and State fairs to aid the public in identifying the barberry and to secure cooperation in destroying the barberry bushes or reporting them so that they can be destroyed. Many bushes have been located and destroyed in this way, but many more still remain.

Organization

The Barberry Eradication Campaign in Iowa is under the direction of a State Leader. It is a cooperative project between the United States Department of Agriculture and the Iowa State College. Many other organizations, including the State Department of Agriculture, State Department of Instruction, and some of the farm organizations also give valuable assistance.

Personnel

During the summer months from fifteen to twenty thoroughly dependable men are employed to locate and destroy barberry bushes. For the most part men are selected who have had farm experience. These men are selected on the basis of high character, personal ability, and their college records. They are trained in problems of barberry eradication before being sent into the field and are able to answer questions relating to the barberry and black stem rust.

Survey Methods

Two methods of survey are used by field men. If the territory has little timber only two men work together, going from one farm to another until all farms are covered in the territory assigned to them. These men are instructed to inspect every orchard, woodlot, or other wooded area on each farm in their territory.

In heavily wooded areas or along large streams these men usually work in groups of four or five, strip-scouting the timber at distances close enough to insure that no barberries are being missed.

Number of Bushes Destroyed

Over a million barberry bushes have been removed from Iowa in the past eleven years. These have been scattered well over the State, as shown by the accompanying map. About 9,500 of these bushes were destroyed during the summer and fall of 1928. Thirty-two and one half tons of salt were used in killing these bushes.

Cost of Destroying Bushes

Since the beginning of barberry eradication in Iowa it has cost about 18 cents a bush to destroy those bushes of which we have a record. This cost is based on all of the money spent in Iowa from April 1, 1918, to December 31, 1928.

Source of Funds and Materials

Funds for barberry eradication are provided by Federal appropriation, through the United States Department of Agriculture. The Conference for the Prevention of Grain Rust, an organization of agricultural and business leaders, has furnished large amounts of material for educational purposes. Office space, heat, light, etc., are furnished by the Iowa State College at Ames, Iowa.

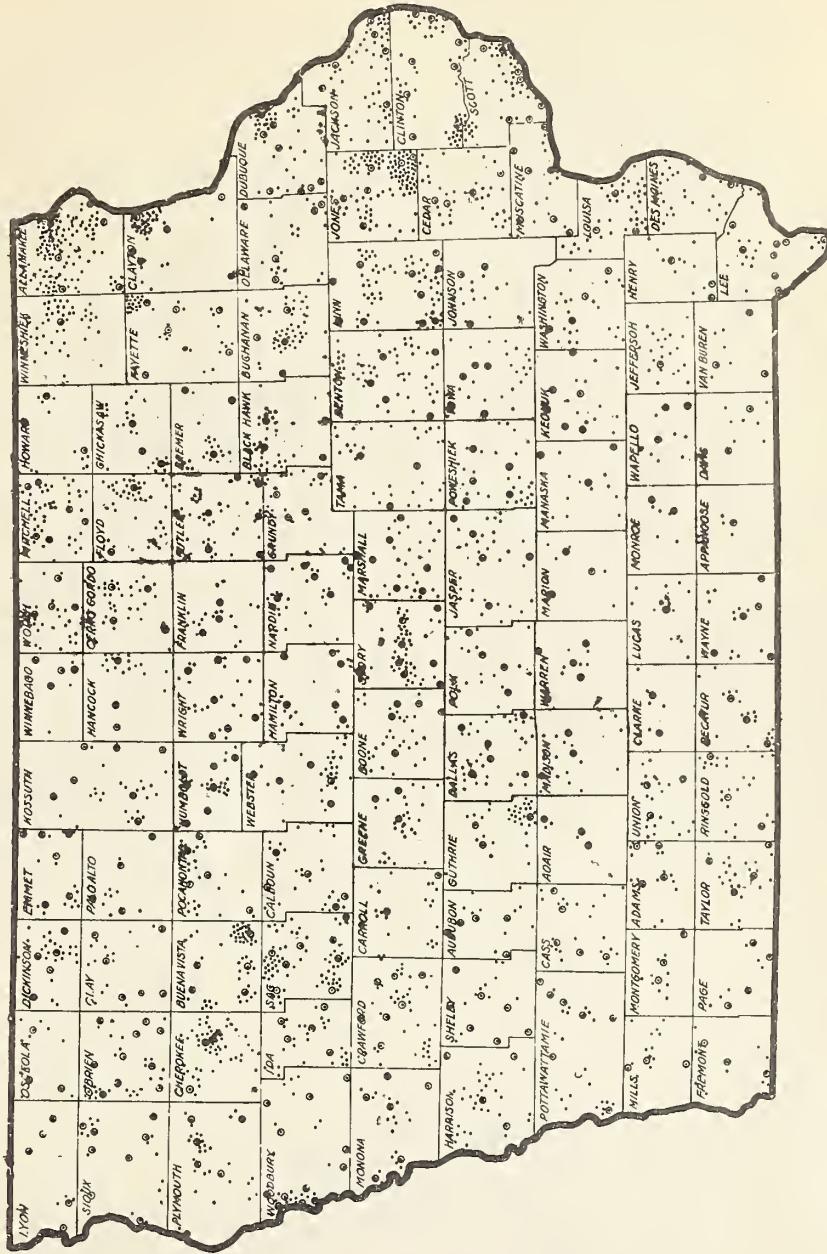
Does Barberry Eradication Control Rust?

By glancing at the inner side of the front cover of this paper, it readily can be seen that black stem rust has decreased materially during the past ten years. The average loss for the first five years was almost three times the loss during the last five years. It is quite probable that in some years a certain amount of rust is blown up from southern States. In the south, rust lives over winter on grain which remains in the growing condition all winter. It seldom, if ever, lives over winter north of central Texas. It is the early rust of the season which does the most damage to grain fields, and rust is nearly always found spreading from barberry bushes before it can be found in any other place.

More detailed information will be sent on request.

PROPERTIES HAVING BARBERRY BUSHES 1918-1928

IOWA



10,297 PROPERTIES
103,519 BUSHES

FARMS HAVING BARBERRY BUSHES
TOWNS HAVING BARBERRY BUSHES

